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Amendment
Attorney Docket No. S63.2B-9964-US01

Remarks

Rejections

35 U.S.C. §112

Claims 6 and 7 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is asserted in the Office Action that it is not clear how tubes are combined via butt or lap joints after they are formed.

Claims 6 and 7 have been amended to clarify the claims.

35 U.S.C. §103(a)

Claims 1, 5, 8-13 and 23-25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Samuelson et al. (US 6,165,166) in view of LaFleur et al. (US 6,087,442). The Office Action asserts that Samuelson et al. teaches medical tubing having outer, core and intermediate tie layers (abstract); the tubing is used in catheters (col 8, lines 60-65 and col. 10, lines 4-56); the outer layer is polyester or polyamide (col. 6, lines 6-23); the polyethylene (col. 6, lines 38-54); the tie layer is made of a material that is capable of adhering outer layer to the core layer to resist delamination (col 6, lines 55-63).

The Office Action admits that Samuelson et al. fail to teach the use of blended polymer powders in the tie layers, which blends contain polymers having compatibility with its outer and core layers, but that LaFleur et al. teach polymer blends (abstract) that can be powdered (col. 7, lines 12-15) and used as tie layers for multilayer articles (col. 7, lines 22-26).

Applicants have amended claims 1, 5 and 23 to more specifically describe the tie.

Claim 1 is now directed to an elongated medical device having a first tubular member formed from a first composition, a second tubular member formed from a second composition, and a powder coated tie layer provided between the first and second tubular member, the tie layer comprising a blend of a plurality of polymeric materials, the blend comprising at least a first polymeric material and a second polymeric material wherein the first polymeric material is compatible with the material of the first tubular member and the second polymeric material is compatible with the material of the second tubular member, and each of said of said plurality of said polymeric materials is melt processible.

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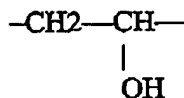
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Claim 5 has been amended to depend from claim 1.

Claim 23 has been amended to incorporate the same features of the tie layer as claim 1.

Samuelson et al. describe a length of trilayer, *extruded* medical tubing having an outer layer comprising a polymer which is directly bondable, a core layer comprising a lubricious polymer, and an intermediate tie layer comprising a polymer having pendant functional groups.

LaFleur et al. describe specific polymeric blends including from about 10 to about 95 parts of at least one *natural and melt-intractable polar polymer* selected from starch, chitin, chitosan, lignin or cellulose and about 5 to about 90 parts of a *polymeric composite* of from about 40 to about 95 parts by weight of a first polymer containing at least 50 mol % of units of the structure



and from about 5 to about 60 parts by weight of a second polymer containing at least about 70 parts of units derived from a lower alkyl methacrylate or acrylate and at least one of either up to about 25 parts of units derived from a vinyl or vinylidene monomer containing an amide group or up to about 25 parts of units derived from an unsaturated carboxylic acid or anhydride.

Thus, at least one component of the blend described by LaFleur et al. is a *natural and melt-intractable* polar polymer which is starch, chitin, chitosan, lignin or cellulose, none of which would be considered to be thermoplastic polymeric materials. LaFleur et al. describes the melt-intractable polymers such as starch, lignin, chitin, chitosan, cellulose, chemically modified cellulose, such as ester such as cellulose acetate, cellulose acetate-propionate, cellulose acetate-butyrate, or ethers such as methyl cellulose, as being extremely difficult to process and may be described as *melt-intractable*. See col. 3, lines 41-49.

Applicants have amended claim 1 to clarify that the blend of the tie layer as described and claimed in the present application, includes a plurality of polymeric materials, each of which is melt processible. Support for the amendment is found throughout the specification as all raw materials disclosed for use in the polymeric blend of the tie layer, are melt processible.

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Consequently, the tie layer of LaFleur et al. is seen as being quite different from that described and claimed in the present invention.

Furthermore, while LaFleur et al. describe the use the blends in tie layers, there is no teaching that the tie layer include one polymer which is compatible with a first substrate and a second polymer of the blend be compatible with a second substrate.

LaFleur et al. is blending the polymer composites described therein with polar polymers such as starch, chitin, chitosan, lignin, or cellulose, described as being melt-intractable, to give a melt-processable blend which may be processed into useful sheet, film, or molded objects. In fact, LaFleur et al. teach that in the sense that processing of the polar polymer is improved, the composites may be considered "processing aids". See col. 3, lines 23-30.

Thus, substituting the blends of LaFleur et al. in the tie layer of Samuelson et al. does not lead one of skill in the art to the embodiment of amended claim 1 of the present application because the blends of LaFleur et al. require starch, chitin, chitosan, lignin or cellulose, which are melt-intractable materials as described by LaFleur et al.

Thus independent claims 1 and 23 as amended, are seen as being patentable distinct over the combination of Samuelson et al. and LaFleur et al.

Claims 5 and 8-13 depend from claim 1 and are patentable for at least the reasons that claim 1 is patentable.

Claims 24-25 depend from claim 23 and are patentable for at least the reasons that claim 23 is patentable.

Applicants respectfully request withdrawal of the rejection of claims 1, 5, 8-13 and 23-25 under 35 U.S.C. §103(a) as being unpatentable over Samuelson et al. (US 6,165,166) in view of LaFleur et al. (US 6,087,442).

New claim 26 has been added. Support is found on page 10, lines 3-15 of the specification. New claim 26 is seen as being patentably distinct over the references of record.

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CONCLUSION

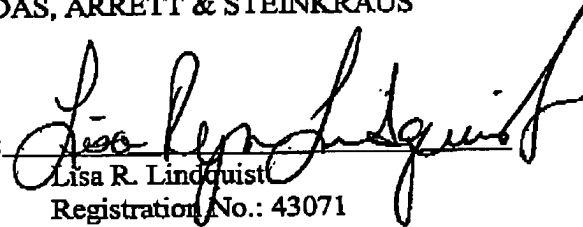
Claims 1 and 5-26 are pending in the application. Applicants have addressed each of the issues presented in the Office Action. Based on the foregoing, Applicants respectfully request reconsideration and an early allowance of the claims as presented. Should any issues remain, the attorney of record may be reached at (952)563-3011, to expedite prosecution of this application.

Respectfully submitted,

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